

CLAIMS

What is claimed is:

1. A system comprising an optical system, wherein the optical system comprises
a curved window having anamorphic symmetry about a first plane and a second plane perpendicular to the first plane;
5 an optical corrector adjacent to a curved inner surface of the window and having an optical corrector shape responsive to a shape of the window, wherein the optical corrector has anamorphic symmetry about the first plane and the second plane; and
a sensor disposed to receive an optical ray passing sequentially through the
10 window and the optical corrector.
2. The system of claim 1, wherein the window is a window in a flight vehicle.
3. The system of claim 1, wherein the anamorphic symmetry of a periphery of the curved window and the anamorphic symmetry of a periphery of the optical corrector are the same.
4. The system of claim 1, wherein the window has a central axis along an intersection of the first plane and the second plane, wherein the window has a window periphery, and wherein a window periphery width measured from the central axis perpendicular to the first plane is greater than a window periphery height measured from the central axis perpendicular to the second plane.
5. The system of claim 1, wherein the window has a central axis along an intersection of the first plane and the second plane, wherein the window has a window periphery, and wherein the window has a window periphery width measured from the central axis perpendicular the first plane that is greater than a

- 5 window periphery height measured from the central axis perpendicular to the second plane, and wherein the system further includes
an airframe fuselage having a fuselage forward end with a forward-end periphery of substantially the same shape and size as the window periphery.
6. The system of claim 5, wherein the window is joined to the fuselage forward end.
7. The system of claim 1, wherein the optical corrector is a fixed optical corrector.
8. The system of claim 1, wherein the optical corrector is a movable optical corrector.
9. The system of claim 1, wherein the sensor is a manufactured sensor.
10. The system of claim 1, wherein the sensor is a human eye.
11. The system of claim 1, wherein the optical corrector is a transmission optical corrector.
12. The system of claim 1, wherein the system further includes
an optical train positioned such that the optical corrector lies between the window and the optical train, wherein the optical train includes at least one optical element operable to alter the optical ray incident thereon, and wherein
5 the sensor is disposed to receive the optical ray passing sequentially through the window, the optical corrector, and the optical train
13. The system of claim 12, wherein the sensor has a field of regard of at least about 10 degrees through the window, the optical corrector, and the optical train.

14. A system comprising
an airframe fuselage having a fuselage forward end with a forward-end
periphery of anamorphic symmetry about a first plane and a second plane
perpendicular to the first plane, a forward-end width measured perpendicular to
5 the first plane, and a forward-end height measured perpendicular to the second
plane and different from the forward-end width; and
a forward-facing optical system, wherein the optical system comprises
a window having anamorphic symmetry about the first plane and
the second plane, wherein the window has a window periphery with a window
10 periphery width that is substantially the same as the forward-end width and a
window periphery height that is substantially the same as the forward-end height,
and wherein the window periphery is affixed to the forward-end periphery of the
airframe fuselage,
a transmission optical corrector adjacent to a curved inner surface
15 of the window and having an optical corrector shape responsive to a shape of the
window, wherein the transmission optical corrector has anamorphic symmetry
about the first plane and the second plane,
an optical train positioned such that the transmission optical
corrector lies between the window and the optical train, wherein the optical train
20 includes at least one optical element operable to alter an optical ray incident
thereon, and
a sensor disposed to receive the optical ray passing sequentially
through the window, the transmission optical corrector, and the optical train.
15. The system of claim 14, wherein the airframe fuselage is a missile
fuselage.
16. The system of claim 14, wherein the transmission optical corrector
is a fixed optical corrector.
17. The system of claim 14, wherein the transmission optical corrector
is a movable optical corrector.

18. The system of claim 14, wherein the sensor has a field of regard of at least about 10 degrees through the window, the transmission optical corrector, and the optical train.